

SEXUAL DIMORPHISM WITH A NEW SPECIES
OF PHILYA WALKER
(HOMOPTERA: MEMBRACIDÆ)

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Sexual dimorphism has long been of interest to entomologists, and many interesting and unusual examples of this phenomenon have been recorded. Capener (1951a) has recently described several examples from South Africa. Dr. Mont Cazier of the American Museum of Natural History has sent me an interesting pair of *Umbonia crassicornis* Amyot and Serville (1843a: 543) from Ft. Lauderdale, Florida. It is not surprising that Amyot and Serville should have thought that the male of this species constituted a new genus; nor is it strange that the male and female have been described as distinct species. Even a cursory examination of the illustrations (Pl. II, Figs. 1-6) will show the remarkable differences between the two sexes of this species, which has a wide distribution, having been described originally from Mexico and recorded subsequently from Central America through Colombia, Ecuador, and Brazil. In the United States it has been recorded from Florida by Amyot and Serville and from Ohio and South Carolina by Van Duzee (1917b: 557).

This interesting case of sexual dimorphism called my attention to another case involving a new species of the genus *Philya* as indicated below.

Philya Walker

(Walker 1858b: 126)

Haplotype *Philya bicolor* Walker

This is a genus of moderate sized species of membracids belonging to the subfamily MEMBRACINÆ and tribe NOTOCERINI. Superficially they resemble the genus *Guayaquila* Goding of the NOTOCERINI and the genera *Enchophyllum*

Amyot and Serville, *Enchenopa* Amyot and Serville, and *Campylenchia* Stal of the tribe MEMBRACINI. They also have a superficial resemblance to the genus *Aconophora* Fairmaire of the subfamily DARNINÆ. The genus *Philya* may be readily distinguished from the genus *Aconophora* by the fact that the anterior tibiæ are strongly foliate in *Philya*. From the other genera in the MEMBRACINI they may be readily distinguished by the fact that the pronotum is broadly arched and flat and not strongly compressed. The frontal horn of the pronotum has a strong median carina in *Philya* but usually lacks conspicuous lateral carinæ which are generally conspicuous in the other genera mentioned. Goding (1928e: 225) recognizes four species of this genus while Funkhouser (1951a: 54) records twelve species. For the present my catalogue contains thirteen species as I consider *curvicornis* Stal (1869c: 279) a valid species. The addition of the new species indicated below will make a total of fourteen species in this genus, all from the Western Hemisphere. These species range southward from the western United States across Mexico and Central America to Colombia, Ecuador, and Brazil.

Head subquadrate, foliaceous ventrally and laterally; median carina of the vertex distinct, with a v-shaped suture separating the frons from the vertex; postclypeus small, almost concealed by the foliaceous ventral margin of the frons. Pronotum rather slender with an elongate porrect frontal process which is more or less expanded and bidentate at the apex; median carina percurrent; dorsal area of the posterior process broadly rounded, rather flat, with usually indefinite lateral carinæ toward the apex; the posterior lateral margins broadly incised from the short humeral angles, halfway to the apex of the process. Tibiæ of all three pairs of legs broadly flattened. Tegmina semiopaque, minutely punctulate, the cells at the apex irregularly reticulate. Hind wings transparent; subcosta and radius united to beyond the middle then separating and forming a large first apical cell, reunited before the apex of the wing to form a common vein which is continuous with the subapical vein; media unbranched, united to the first apical cell by a short cross vein and to cubitus one-a by an elongate vein; cubitus one with two main branches.

Male genitalia with the pygofer broadly triangular, the genital plates somewhat clavate, genital styles elongate, obtuse apically; the ædeagus tubular, somewhat inflated apically with a strongly curved acute process internally.

Philya inflata n. sp.

Pl. III, Figs. 1-9

Face nearly quadrangular, slightly longer than broad, the ventral margin broadly obtusely rounded, the dorsal margin rounded; the ocelli nearly twice as far from each other as from the compound eyes. Pronotum elongate, slender, median carina percurrent, whole surface densely and rather coarsely punctate, the punctures each with a short, minute, hair-like spine; frontal process elongate, differing decidedly in the male from the female; in the male the horn is strongly inflated on the apical third, laterally with a distinct vertical carina, dorsally the inflated part is more or less quadrangular with distinct lateral teeth; lateral margins usually more or less rugulose. Frontal horn in the female elongate, somewhat more slender than in the male, dorsal margin nearly straight to the apical fifth; ventral margin slightly expanded on the apical third; apex of the frontal horn slightly expanded when viewed dorsally with short obtuse teeth laterally. Humeral angles short, obtusely produced; lateral margins distinctly incised posteriorly to the humeral angles; the apical area strongly produced laterally with at least one distinct carina. Tegmina with the basal two-thirds strongly punctulate, each puncture provided with a short, hair-like seta; the apical third semiopaque, apical venation rather irregular. Anterior tibiæ strongly, triangularly foliaceous; intermediate tibiæ not so strongly inflated, posterior tibiæ rather strongly inflated with the anterior margin with several stout teeth before the apex and ciliate with elongate, slender hairs.

Male genitalia with the genital plates elongate, more than twice as long as broad; apex obtuse; pygofer triangular, nearly equilateral; genital plates when viewed laterally strongly clavate; genital styles elongate, the apex recurved with a slender tooth directed cephalad; ædeagus broad and short, tubular, with the internal process elongate, recurved; tenth segment elongate, tubular; anal style short, slender, when viewed laterally rather obtuse at the apex. Female with the last ventral segment deeply, triangularly incised almost to the anterior margin.

General color ochraceous tawny with the face strongly clouded with blackish fuscous; the frontal horn is clouded with blackish fuscous on the apical two-thirds leaving smaller areas of ochraceous tawny; basal third of the frontal horn and the posterior process of the pronotum tawny with a few irregular fuscous markings, especially on the apical third; tegmina sometimes entirely ochraceous tawny, sometimes with the basal area and a rather broad fascia before the apical cells blackish fuscous; beneath with the thorax chiefly blackish fuscous, the abdomen ochraceous orange; femora chiefly blackish fuscous, the tibia and tarsi chiefly ochraceous tawny.

Length apex of frontal horn to apex of pronotum 8.2 mm. to 9.0 mm. Length from apex of frontal horn to humeral angles 4.25 mm.

Holotype ♂: Nova Teutonia, Santa Catarina, Brazil; October 23, 1945; F. Plaumann. Allotype ♀: Nova Teutonia, Santa

Catarina, Brazil; October 23, 1945; F. Plaumann. Paratypes 9 ♂♂ and 1 ♀: Nova Teutonia, Santa Catarina, Brazil; October 23, 1945; F. Plaumann.

Bibliographical references are as cited in Metcalf 1944a and 1944b except for the following:

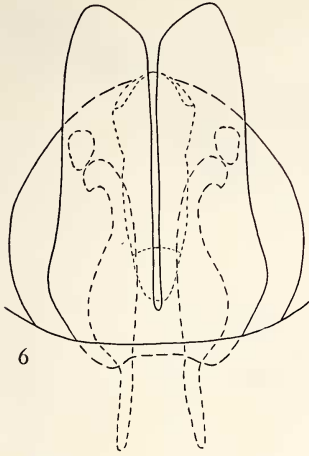
CAPENER, A. L.—1951a—Sexually dimorphic Membracidae from Southern Africa. *Jour. Ent. Soc. South Africa* 14: 152-164; Figs. 1-50.

FUNKHOUSER, W. D., 1951a—Homoptera, Fam. Membracidae—Genera Insectorum 208: 1-383; Pls. I-XIV; Text figs. 1-9.

PLATE II

Umbonia crassicornis Amyot and Serville

- Fig. 1. Lateral view of ♂
- Fig. 2. Frontal view of ♂
- Fig. 3. Lateral view of ♀
- Fig. 4. Frontal view of ♀
- Fig. 5. Lateral view of ♂ genitalia
- Fig. 6. Ventral view of ♂ genitalia

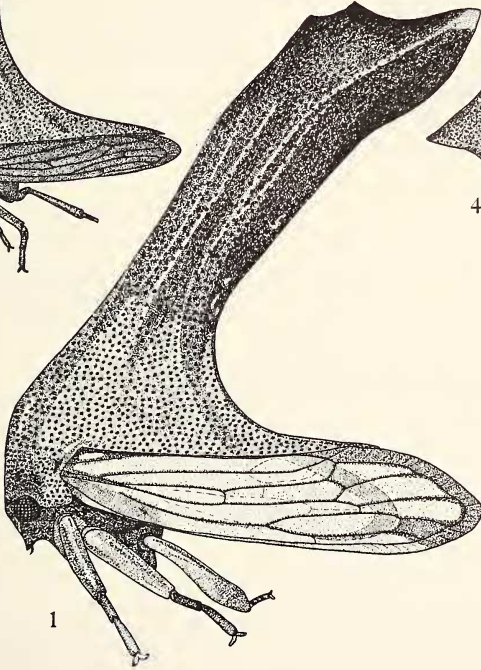


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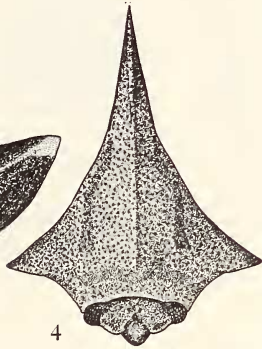
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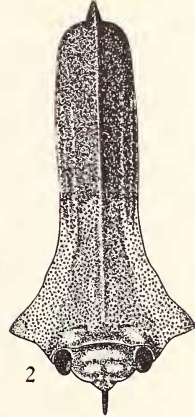
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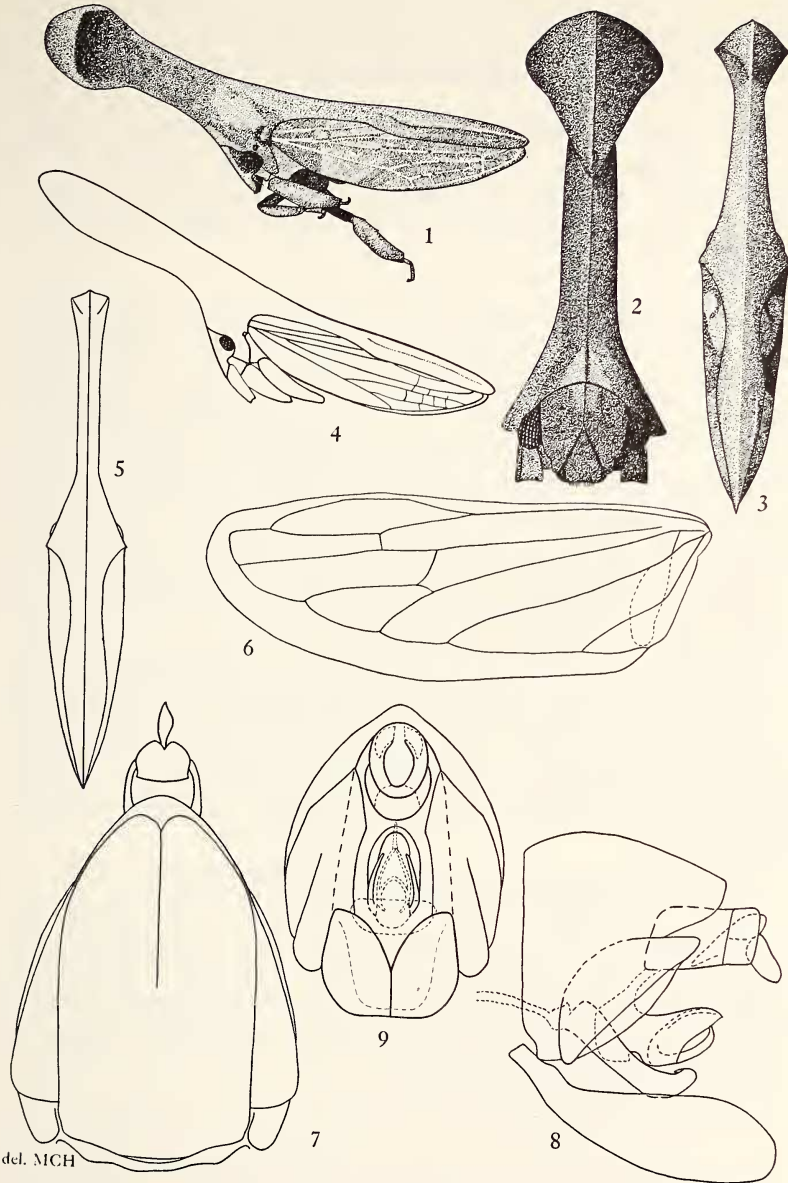


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PLATE III

Philya inflata n. sp.

- Fig. 1. Lateral view of ♂
- Fig. 2. Frontal view of ♂
- Fig. 3. Dorsal view of ♂
- Fig. 4. Lateral view of ♀
- Fig. 5. Dorsal view of ♀
- Fig. 6. Hind wing of ♂
- Fig. 7. Ventral view of ♀ genitalia
- Fig. 8. Lateral view of ♂ genitalia
- Fig. 9. Posterior view of ♂ genitalia.



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